

Appl. No.: 09/730,327  
Amdt. Dated: June 12, 2005  
Off. Act. Dated: January 12, 2005

### **REMARKS/ARGUMENTS**

Reconsideration of this application is respectfully requested in view of the foregoing amendments and discussion presented herein.

1. Allowability of Claims 20, 25-26, 36-38, 47, 61, 73, 78-79, 82, 90, 93-95 and 100.

The Applicant notes with appreciation the Examiner's determination that Claims 20, 25-26, 36-38, 47, 61, 73, 78-79, 82, 90, 93-95 and 100 would be allowable if rewritten in independent form to include all the limitations of the base claim and any intervening claims.

In order to expedite issuance of the application, Applicant has rewritten a number of these claims into the pending independent claims within the application, wherein Applicant can pursue additional claims in a later continuing application. Claims 25, 36, 47, 61, 73, 79, 82, 100 (along with the material of original intervening claims) within this group of claims found to be allowable were specifically incorporated into the existing independent claims, and new independent claims.

Claim 1. Independent Claim 1 was amended to include dependent Claim 61 and intervening Claim 60, directed to alert severity and types of alert severity.

Claim 6. Independent Claim 6 was amended to include dependent Claim 25 directed to aspects of event signal regeneration.

Claim 67. Independent Claim 67 was amended to include dependent Claim 79 directed to the inclusion of direction of travel information.

Claim 96. Independent Claim 96 was amended to include the material of Claim 72-73, and/or Claim 47. Before including these elements independent claim 96 was rewritten form similar to Claim 67 from which 72 depends, but without reference to position data.

Claim 97. Independent Claim 97 was amended to include the material of Claim 100 and intervening Claim 99.

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Claim 102. This independent Claim was cancelled.

Claim 103. This new independent Claim was added (replacing independent Claim 102) which is like independent Claim 6 adapted in the form of independent Claim 67 and including the limitations of Claim 36.

Claims 104-105. These added dependent claims include the material from Claims 37 and 38 now directed respectively to Claim 103, 104.

Claim 106. This new independent Claim was added, and has the same base as Claim 103 but includes the material of Claim 82 within intervening Claim 81.

2. Amendments Made Without Prejudice or Estoppel.

Notwithstanding the amendments made as described above, Applicant has made these amendments in order expedite allowance of the currently pending subject matter. However, Applicant does not acquiesce in the original ground for rejection with respect to the original form of these claims. These amendments have been made without any prejudice, waiver, or estoppel, and without forfeiture or dedication to the public, with respect to the original subject matter of the claims as originally filed or in their form immediately preceding these amendments. Applicant reserves the right to pursue the original scope of these claims in the future, such as through continuation practice for example.

3. Rejection of Claim 47 under 35 U.S.C. §112.

Claim 47. The rejection of Claim 47 considers that the alerting of the driver is indefinite. Applicant has removed the portion considered indefinite. It should be recognized that Applicant was describing instances of how the muting is used, such as in response to event signals from either emergency vehicles or from roadway conditions for which event signals were received.

4. Rejection of Claims 1-10, 12-19, 21-22, 28-33, 35, 39-42, 44-46, 48-49, 60, 67-72, 74-77, 80-81, 83-89, 91-92, 96-99, 101-102 under 35 U.S.C. §103(a).

These claims were rejected based on various combinations of a number of references.

Applicant has rewritten all independent claims in the application and new independent claims to include the material of claims found to be allowable so as to expedite allowance of the instant application which has been pending for over 4 ½ years.

However, although the claims have been put in order for allowance following what the Examiner has deemed allowable. The Applicant would still like to quickly address a few aspects of these rejections which Applicant believes to have been in error (which applicant expects to address in a later continuation application).

(1) Applicant was the only one to teach communicating a plurality of event signals from a plurality of vehicles dispersed on the roadway. ALL of the cited art relies on the concept of one vehicle positioned directly behind another (chain) and capable of receiving signals only from that vehicle, or through that vehicle from the one ahead. This metaphore is invalid under actual driving conditions and in considering that not all vehicles will necessarily be outfitted with such a collision avoidance system immediately. In addition, none of the other system provide the safety in fog and traffic of Applicant's system - they rely on proximity and chaining.

The slots described by the Applicant were not found, nor suggested in any of the other references, and yet these claims were rejected based on a "modification" which was nothing more than a vague general concept of how time slots are used in time division multiplexing, which did not address the aspects for which the time slots were involved in this system - as described above to support the plurality of event signals from a plurality of vehicles.

Applicant system described the use of communication slotting for the communication of a plurality of events from the dispersed vehicles. None of these other

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systems can accommodate this real world ability (as was recited in claim 85).

Applicant system was the only one that described a mechanism for synchronizing the communications even when the lead vehicle changes, as was recited in claim 15. Applicant invention provides synchronization of multiple simultaneous senders and receivers, that need not be in a single line, wherein real world conditions are met by the device.

Dunning actually teaches away from the use of radio to limit the number of data sources that a particular vehicle must respond to. See col. 7, lines 47-68. It is not even properly combinable with an RF based system. Moreover, Dunning specifically states that his system *"does not support transfer of data to multiple vehicles either simultaneously or individually."* Which is a major thrust of Applicant's invention and the solution provided by Applicant's being the reason why use is able to be made of an RF system which is capable of radiating a signal to cars in many lanes which are following the lead car, as well as to cars hidden by fog, rain, and other vehicles. The communication slots and synchronization are not needed in Dunning as it only support a single paths of communication. Rahman also support a linear string - has not considered the problems with disseminated the information across multiple lanes. He teaches the use of moving the transmitter position in response to curves. Has no need of multiple encoding within the slotting configuration of the Applicant.

MPEP 2141.02 - *"A patentable invention may lie in the discovery of the source of a problem even though the remedy may be obvious once the source of the problem is identified. This is part of the 'subject matter as a whole' which should always be considered in determining the obviousness of an invention under 35 U.S.C. § 103."*

(2) Applicant respectfully contends that a number of elements were improperly equated to aspects of Applicant's claimed invention. Specifically, the heading information described in one claim was equated to the steering wheel sensor of a reference. It should be readily appreciated that the steering wheel sensor can provide

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“swerve” information, but it cannot render a direction of travel or heading. The heading information being important for discerning which signals are to be rejected since applicant describes the use of RF signals instead of optical signals (which were used by Dunning, Beymer, Gao, and largely Rahman) because of the very problem with signals being received by too many vehicles. Also in another area the severity levels being transmitted by RF as described by the Applicant were improperly equated to the different light levels generated by the hard-braking light of Gao. Other problems of this nature also were found.

(3) Improper combinations were found throughout these rejections. Combination are only proper when suggested, or a motivation/incentive found in the reference itself, and the combination must describe in detail how the relied upon art is to be altered to meet all claims objections. When a lack of specificity exists in the suggestions to modify a reference then the Examiner has failed to make out a *prima facie* showing of obviousness.

In the future, Applicant plans on directly contacting the Examiner and working more closely toward prosecuting future continuation applications of this invention. Applicant apologizes for not having phone or face-to-face meeting with the Examiner as perhaps we may have progressed further and faster toward issuance - which would have been beneficial to us both (*...and to the safety of the public at large*).

5. Amendment of Claims 1, 6, 8-9, 25, 33-34 47, 60-61, 67, 79, 96, 97, 99-100 and 102.

Claims 1, 6, 67, 96, 97. These independent claims within the application were amended to include material within dependent claims which was considered allowable if rewritten in an independent form.

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Claim 8, 9. The material of Claim 9 was incorporated within amended Claim 8 and Claim 9 canceled.

Claim 25, 60-61, 79, 99, 100. These dependent claims were cancelled as they were included within their respective independent claims.

Claim 26. These claims were amended to correct dependencies, as necessitated by inclusion within respective independent claims.

Claim 33, 34. The material of Claim 35 was included in Claim 33 and Claim 34 canceled.

Claim 47. This dependent claim was amended to correct an indefiniteness issue as described earlier.

Claim 102. Independent Claim 102 was canceled.

6. Addition of Claims 103-109.

Claim 103. Independent Claim 103 was added to replace independent Claim 102 and to incorporate the material of Claim 36 found allowable.

Claims 104-105. These claims depend from Claim 103 and recite the material of previously presented Claims 37-38.

Claim 106. Independent Claim 106 was added to the application to incorporate the material of Claim 82 and intervening claim 81 with a base claim having the important material of independent Claim 67.

Claim 107. A dependent Claim depending from new claim 106. Claim is directed at the inclusion of direction of travel information includes direction of travel information derived from the GPS unit. Support is found throughout the specification, including the following: page 62, lines 16-19: *"Although the transmitters and receivers are directionally oriented, this precaution further reduces the probability that vehicles traveling in the opposing direction will pick up enough signal intensity to trigger an unnecessary hard braking alert"*. Also on page 63, lines 12-16: *"Often the direction information provided by the GPS alone is insufficient to determine navigation and*

*turning information, but when coupled with high accuracy compass information, the GPS navigation system can more easily determine exact vehicle location on the roadway. Therefore the high accuracy compass used performs double duty."* The embodiment describes a compass to provide higher accuracy direction info, although it mentions here that direction information from the GPS unit itself can also be used.

Claims 108, 109. Dependent claims which describe in greater detail the slot based communication and synchronization provided in the present invention. Support is found throughout the specification, including FIG. 6-7 which illustrates example event signal packet data and slotting within the present invention, and page 37, lines 15-18; page 48, lines 1-2; page 81, lines 11-13; page 82, lines 1-4; page 83, lines 6-10; page 83, lines 17-18; page 85, lines 19-21; page 86, lines 16-19; page 88, lines 3-6 and so forth.

7. Additional Claim fees.

One independent Claim has been added to the application; the number of total claims remains unchanged (*Claims 9, 25, 34, 60, 61, 79 and 102 deleted; with Claims 103-109 added*). An appropriate fee of \$100 (small entity) is included for the additional independent claim.

8. Extension of Time Petition.

The Applicant has enclosed a petition for a two-month extension of time to respond to the Office Action and has enclosed the appropriate petition fee.

9. Conclusion.

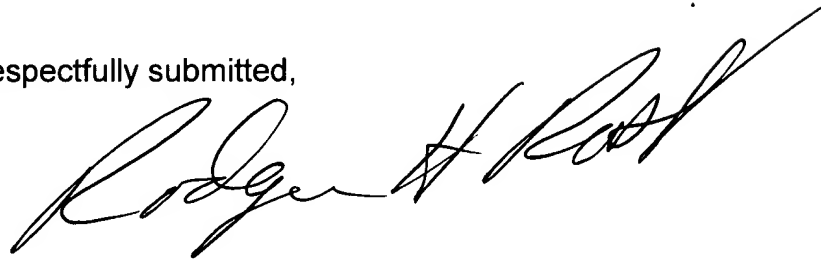
The amendment modifies, and/or adds, a number of claims within the present application according with the claims allowances of the previous office action. Each of these presently pending claims in this application are believed to be in immediate condition for allowance.

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The Applicant respectfully requests a response/interview (email/phone) with the Examiner if any issues remain prior to the allowance of all pending claims.

Date: June 12, 2005

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Rodger H. Rast", with a stylized flourish at the end.

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